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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/708,515

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Ronald L. Gordon

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EXAMINER

RASHID, DAVID

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/708,515	<b>Applicant(s)</b> GORDON ET AL.	
	<b>Examiner</b> DAVID P. RASHID	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 12-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-10 and 12-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Table of Contents***

<b><i>Continued Examination Under 37 C.F.R. § 1.114</i></b> .....	2
<b><i>Amendments &amp; Claim Status</i></b> .....	2
<b><i>Response to Arguments</i></b> .....	2
<i>Summary of Remarks regarding Rejections under 35. U.S.C. § 103</i> .....	2
<b><i>Claim Rejections - 35 U.S.C. § 101</i></b> .....	3
<i>In Re Bilski – “Tied To” Criteria</i> .....	3
<b><i>Claim Rejections - 35 U.S.C. § 112</i></b> .....	4
<i>Failure to Particularly Point Out and Distinctly Claim</i> .....	4
<b><i>Allowable Subject Matter</i></b> .....	4
<b><i>Conclusion</i></b> .....	5

### ***Continued Examination Under 37 C.F.R. § 1.114***

[1] A request for continued examination under 37 C.F.R. § 1.114, including the fee set forth in 37 C.F.R. § 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 C.F.R. § 1.114, and the fee set forth in 37 C.F.R. § 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 C.F.R. § 1.114. Applicant's submission filed on Jan. 2, 2008 has been entered.

### ***Amendments & Claim Status***

[2] This office action is responsive to the Amendment after Final Rejection received on Aug. 26, 2008. Claims 1, 3-10, and 12-25 remain pending.

### ***Response to Arguments***

[3] Remarks filed Aug. 26, 2008 with respect to claim 25 have been respectfully and fully considered, and found persuasive.

### **Summary of Remarks regarding Rejections under 35. U.S.C. § 103**

As acknowledged in the Examiner's Response to Argument section of the above- identified Office Action, Neither Robles nor Papadopoulos, alone or in combination, disclose or suggest creating Voronoi cells around spaced IC shapes, determining bisectors representing defined shared boundaries of adjacent Voronoi cells (and are equidistant from edges of adjacent IC shapes), whereby different types of bisectors are determined based on the vertices thereof. As such, neither Robles nor Papadopoulos, alone or in combination, disclose or suggest creating SRAFs between

Art Unit: 2624

adjacent ones of the spaced IC shapes based on these different types of bisectors. The Examiner has also acknowledged that LaCour does not teach or suggest identifying different types of bisectors, and then creating SRAFs in locations based on these different types of bisectors, as is currently claimed.

Applicant's Remarks at 15, Aug. 26, 2008.

The amendment to add "identifying different types of bisectors based on vertices thereof" and then "creating sub-resolution assist features based on said different types of bisectors" (with the claim as a whole) is not taught, alone or in combination, disclose or suggested by neither *Robles* nor *Papadopoulou*.

### ***Claim Rejections - 35 U.S.C. § 101***

[4] In response to the Amendments to the Claims received on Aug. 26, 2008, the previous § 101 rejections are withdrawn.

[5] 35 U.S.C. § 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

### ***In Re Bilski – "Tied To" Criteria***

[6] **Claims 25** is rejected under 35 U.S.C. § 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent<sup>1</sup> and recent Federal Circuit decisions<sup>2</sup> indicate that a statutory "process" under 35 U.S.C. § 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

Claim 25 does not meet criteria (1) as the machine (i.e., "a photomask") is only tied to an intended use statement (i.e., "to be projected via a photomask"), and such a positively recited tie required must be in relation to a step or steps that are significant to the invention" or basic

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<sup>1</sup> *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

<sup>2</sup> *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

inventive concept. Projecting via a photomask is also an insignificant post solution activity that is not a meaningful tie.

Claim 25 also does not meet criteria (2) as there is no underlying material being transformed to a different state or thing. All method steps are directed to internal software signals that involves no physical transformation.

***Claim Rejections - 35 U.S.C. § 112***

[7] In response to the Amendments to the Claims received on Aug. 26, 2008, the previous § 112 rejections are withdrawn.

[8] The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

***Failure to Particularly Point Out and Distinctly Claim***

[9] **Claims 1, 3-10, and 12-24** are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The identification of different types of bisectors (once they are determined) and then the creation of SRAFs based the different types of bisectors appears circular. The creation of SRAFs are based on the different types of bisectors, but those different types of bisectors are dependent by definition (in the claim) on SRAF position with respect to each of those bisectors (e.g., the first type of bisector requires by definition a specific position of an SRAF). If, by example, the first type of bisector requires a specific SRAF position to be identified as the first type of bisection, and then creating SRAF between the adjacent ones of the spaced integrated circuit shapes based on the first type of bisection – it appears that two sets of SRAF exist in the same area (one needed to define the first type of bisector, the second then created based on the first type of bisector).

***Allowable Subject Matter***

[10] **Claims 1, 3-10, and 12-24** would be allowable if rewritten or amended to overcome the rejections under 35 U.S.C. § 112 set forth in this Office action.

[11] **Claim 25** would be allowable if rewritten or amended to overcome the rejections under 35 U.S.C. § 101 set forth in this Office action.

***Conclusion***

[12] Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID P. RASHID whose telephone number is (571)270-1578. The examiner can normally be reached Monday - Friday 7:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571) 272-74155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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